Age Matters: Bridging the Generation Gap through Technology-Mediated Interaction

Dave Harley
Interact Lab,
University of Sussex,
Brighton. BN1 9PH UK
d.a.harley@sussex.ac.uk

Frank Vetere
Dept of Information Systems
University of Melbourne
111 Barry St. Carlton , VIC
Australia
f.vetere@unimelb.edu.au

Sri H Kurniawan
Computer Engineering,
UC Santa Cruz,
Santa Cruz, CA, USA
skurnia@ucsc.edu

Geraldine Fitzpatrick
Interact Lab,
University of Sussex,
Brighton. BN1 9PH UK
g.a.fitzpatrick@sussex.ac.uk

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Abstract
Internet-based, mobile and pervasive technologies provide the means for older people to establish and maintain intergenerational relationships over long distances. However the significance of this intergenerational context has been largely ignored when considering potential interactions and the design of new technologies. This workshop aims to explore what the important issues are when considering intergenerational contact as a significant context for design. The overarching objective of this workshop is to identify key research themes in respect of intergenerational communication and its implications for the design of interactive systems.

Keywords
Intergenerational communication, older users

ACM Classification Keywords
H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction
Social isolation is becoming a problem for older people in the developed world [17, 14] and issues of social support and companionship for older people are

receiving a substantial amount of empirical and theoretical attention as a result [20,6]. Social participation through communication is essential for maintaining older people's quality of life [13] and even after controlling for a range of demographic, health, and lifestyle variables, greater social networks have been shown to have a protective influence against mortality [8]. However, maintaining social contact and involvement with others is problematic for older people. Peer relationships are progressively lost due to death and illness and the ability or motivation to seek new relationships reduces as mobility declines [11]. Contact with younger generations is also complicated as families rarely remain in a particular locality from generation to generation and mass migration is common for economic reasons. Different generations tend not to live together or in the same neighbourhood any more [16,17] and everyday opportunities to share experience and resources across generations in a face to face manner are diminishing [18,19].

Older people stand to benefit from the continuing revolution in Internet and pervasive computing. Such technologies could go a long way towards alleviating social isolation. E-mail provides a cheap source of contact to friends and relatives who are near or abroad. There is also the possibility of meeting people outside of one's family via the Internet, most of whom are likely to be from the younger generation. In today's information society, older people increasingly use various new communication media such as email, computer-mediated communication (CMC), and blogs, with more and more enjoying being a part of virtual communities [13,2]. Social opportunities are also developing as a result of Internet games as well as mobile, pervasive and tangible computing and devices.

Issues

Despite the social potential of technology, and the evidence that older people are the fastest growing user group online, there remain a number of obstacles to more widespread technology uptake. Innovation in technology doesn't tend to explicitly account for the needs and limitations of older users, focussing on the younger generation who are seen as the most likely consumers of it. This perspective is reflected in both the marketing of products and in the approach to usability employed by designers [3]. Similarly the anticipated social dynamics for web technologies are those that operate amongst peers within younger age groups rather than amongst older people or across generations. Hence *accessibility* can be an issue. This is not just in physiological terms, e.g., decreased fine motor skills. It is in terms of conceptual and interactional accessibility, e.g., lack of familiarity with basic terms and conventions and how to make sense of web-based functionality [1]. We need to take explicit account of older people in an intergenerational design context so that they are not at a disadvantage [4].

Another issue is the *different intergenerational contexts* that can be supported: familial and beyond. Familial intergenerational contact in particular has been identified as a significant motivation for older people to engage and persevere with new video-based communication technologies [12], and to learn how to use applications such as email or IM when they facilitate communication with family members that they do not often see [15]. There are also growing opportunities for new forms of social networks and intergenerational connections beyond familial and geographical contexts. The different issues entailed in these different contexts are yet to be fully explored.

The technical *possibilities* for intergenerational communication are also expanding. Beyond email and IM, new web 2.0 technologies highlight very different opportunities, e.g., as experienced by Peter (Geriatric1927) who has established an international network of intergenerational relationships through YouTube [9, 10]. Pervasive and tangible technologies offer even more possibilities, e.g., for playful cross-generation interactions through tangible technologies within familial contexts [5,7] and beyond. Some pervasive technologies are starting to make their way into older people's homes, but often as part assistive or telecare packages, and the potential for the same infrastructure to support social contact is not realised.

Goals

This workshop intends to investigate intergenerational communication as a significant context to understand and design for, bringing together an interdisciplinary group of researchers, designers and developers with experience and knowledge in intergenerational communication. The overarching objective is to identify key research themes in respect of intergenerational communication and the design of interactive systems:

1. What is the state-of-the-art of computer mediated intergenerational communication?
2. What are the issues to be considered when designing, evaluating, using, and learning to use new technology for intergenerational communication?

In particular, we intend to focus on the following topics:

- What kinds of technologies are relevant to different intergenerational contexts and what kinds of interactions do they enable?
- How does computer mediation affect the nature of the intergenerational communication and relationships that we see online?
- What are the broader social issues relating to intergenerational contact online?
- How does intergenerational contact influence technology adoption?
- What is the influence of intergenerational stereotypes on the success and failures of computer mediated intergenerational communication?
- What are the design issues pertinent to an intergenerational context?
- How relevant are accessibility measures in accommodating intergenerational communication?

The workshop will also be the impetus for a call to submit full papers to a special issue of the journal, *Universal Access in the Information Society.*

Conclusion

Internet-based, mobile and pervasive computing solutions have the potential for re-engaging different generations in communication and creative play. The aims of this workshop are to identify the obstacles and opportunities for enabling this, and to explore the different kinds of intergenerational relationships that technology is able to support both within families and beyond, unearthing the implications that this might have for future design work.

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